

# SWB and Entergy Reliability Initiative



January 2019

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# Overview

- Entergy and S&WB have formed a Joint Reliability team to identify and implement measures to increase reliability to S&WB facilities and transition to Entergy as primary source of reliable and economic power
- The New Orleans Power Station (NOPS) is a cornerstone of Entergy's ability to provide reliable and economic power to S&WB
  - NOPS will ensure grid stability and prevent cascading outages that could interrupt service to any new substation
  - NOPS will also help serve any new pumping load as S&WB transitions away from generating its own power to Entergy as its primary source of power
  - NOPS will provide a local source of blackstart power close to the City that can support S&WB operations following extreme weather events
- Measures designed to increase reliability to S&WB facilities assume NOPS is constructed – absent NOPS those measures may prove ineffective
- Entergy will continue to collaborate with S&WB, and it is critical to recognize that NOPS and providing reliable service to S&WB go hand in hand



# Joint Reliability Team

Boil Water Advisories over recent years have increased due to Power Quality issues at Carrollton Plant

Nov 5, 2018 Entergy and SWB agree to reconvene their joint Reliability Team

Joint Reliability Team met on:

12/5/18  
12/18/18  
1/16/19

To develop solutions

Joint Reliability Team produced an initial solution set and continues to refine the details

## Results of Joint Reliability Team Efforts:

- Short Term Risk Mitigation Efforts
- Mid-Term Improvement Options
- Long Term Solution

# Area Map - Carrollton Plant



# Short Term Risk Mitigation

## Enhanced Feeder Maintenance

- Completed maintenance identified during infrared inspection of feeders serving SWB Carrollton Plant
- Enhanced inspection program to include bi-annual visual and infrared of all feeders and vaults – March and September
- Pending – cross arm replacement on Feeder 2016

## Southport Sub

- Monthly Infrared inspections
- Installed new primary and backup relaying on Ninemile and Labarre transmission circuits serving Southport Sub
- Installed new primary and backup relaying on Transformer #1
- Upgraded Load Tap Changer on Transformer #1
- Performed distribution breaker maintenance
- Installing animal mitigation equipment to address Monk Parakeet infestation

## Joliet Sub

- Monthly Infrared inspections
- Installed new primary and backup relaying on Midtown transmission circuit serving Southport Sub
- Installing animal mitigation equipment to address Monk Parakeet infestation
- Deploying permanent infrared cameras to immediately report HV and LV temperature changes
- Evaluating permanent flood mitigation measures

## Improved Communication

SWB and Entergy have direct lines of communication between control centers

Implemented new communications protocol to keep SWB and Entergy control room operators apprised of outages and abnormal switching events

# Mid-Term Improvement Options

## Option 1: Reduce Exposure

- Evaluating methods to reduce outage exposure on circuits serving Claiborne, Sycamore, Hamilton and Carrollton Vaults by:
  - Rerouting circuits
  - Installing reclosers
  - Relocating circuit tie/transfer points

## Option 2: Create Redundancy

- Add 2<sup>nd</sup> source into Hamilton and Sycamore Vaults
- Add Automatic Load Transfer Schemes to Hamilton and Sycamore Vaults

## Option 3: Provide Customer Flexibility

- Increase feeder capacity at the Hamilton vault to allow more flexibility inside SWB facility

# Long Term Solution

## Transmission Level Service

- Build 230/24kV Sub
- Four (4) breaker 230kV Ring Bus Configuration
- Two (2) 67MVA Power Transformers
- Eight (8) 24kV Feeder Breakers

## Optimize Electrical Operation

- Utilize 3<sup>rd</sup> party vendor to review customer electrical arrangement, evaluate customer operational plan and model switching transients to ensure reliable operation under various customer configurations
- Utilize 3<sup>rd</sup> Party vendor to document customer electrical arrangement to support future troubleshooting efforts

## Benefits

- Served by two independent transmission sources
- Proposed substation will be located adjacent to S&WB Claiborne Pumping Station, creating shorter circuit runs and reducing circuit exposure
- New facilities have capacity to serve up to 70MW
- Ensures strong Power Quality in various customer configurations



## N.O. SWB Reliability Initiative

**GOAL:**  
Implement a customer focused solution to reliably and cost effectively serve electrical power requirements for New Orleans SWB.

### TEAM

#### Entergy

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#### N.O. SWB

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Bruce Adams  
Richard Rainey  
Ron Spooner  
Robert Turner

### Next Steps

Schedule meeting for Distribution sub-team

2/1/19 – Finalize scope for providing 7.5MVA of total capacity at Hamilton and/or Claiborne delivery point (short term mitigation)

02/13/19 – Conduct team meeting #3 with customer technical team. Present short term reliability improvement that Entergy Management has approved for implementation.

02/13/19 – Prepare billing estimates for service from new substation.